

ABSTRACT

Disclosed is a method for reconstructing the profile of structures on surfaces. According to said method, at least two images of the same area of the surface that is to be analyzed are evaluated, said images being recorded from a nearly vertical perspective, for example, and the surface being illuminated from different directions at a flat angle thereto. Elevations or depressions on the surface thus cast a distinct shadow in the recorded images, the position of which varies according to the incident light. Inclined areas can be identified by means of a brighter reflection. The vertical profile of a structure on the surface can be determined, and the shape of a fin can hence be reconstructed, for example, by analyzing shadow contours and outlines of bright areas. Even flat inclination changes can be determined by integrating the shape-from-shading process so as to evaluate brightness patterns such that a 3D reconstruction of the surface can be obtained, which matches the original well.